

STATE OF UTAH GENERAL OUTLOOK

April 1, 2005

SUMMARY

April first is typically the peak of snow accumulation for Utah. Low elevation snowpack generally starts to melt with the mid and high elevations soon to follow. When an exceptionally large snowpack occurs, such as what we currently have in southern Utah and the Uintah Basin, snow accumulation in the higher elevations could continue for another month or even longer. The snowpack must come to isothermal conditions prior to being able to melt and the physical mass of a large snowpack takes a much longer time to come to this condition. During this time, additional snow accumulation is possible from late season storms which, in turn increases the potential of extremely high streamflow. Yet another factor complicates this scenario. Large snowpacks take longer to melt out during which time large regions of the watershed are getting 1 to 2 inches of melt per day, keeping soils in a saturated condition. The probability of getting high intensity precipitation events on top of snowmelt and saturated soils is reasonably high. This certainly increases the potential for high peak flows as well as agricultural and other kinds of damage. This March kept water watchers on pins and needles with the first three weeks being very dry and very reminiscent of the March of 2004 where snowpacks melted early and a disastrous water year followed. The final days of March were extremely wet and snowpacks across the state benefited. Overall, water supply conditions are improving statewide compared to years past with reservoir storage on the upswing, soil moisture is vastly improved and snowpacks are all above average. Snowpacks range from 102% over the Bear River Watershed to 234% over southwest Utah. None of the basin snowpack averages are now in record territory but many individual sites have shattered all time record maximum snowpack totals. Low elevation snowpacks are much less than we have seen in other large years due mainly to relatively mild temperatures this winter. With large snowpacks in southern Utah and the Uintah basin, comes the potential for very high snowmelt streamflow. For some streams like Coal Creek which has over 262% of average snowpack and has broken the old maximum record snowpack by nearly 15 inches of snow water equivalent, it is likely not if, but merely when the high flows will occur. While many outcomes remain possible in these areas, it is prudent to begin preparation for potentially high snowmelt streamflow this spring. Precipitation for March was near average statewide at 108%. Northern Utah ranged from 92% to 122% and southern Utah had 94% to 119% of average. This brings the seasonal precipitation, (Oct-Mar) to 137%. Estimates of soil moisture range from about 30% to 85% of saturation in the upper 24 inches of soil. Low reservoir storage is becoming less of a concern with total reservoir storage at 48% of capacity, up 3% from last year. All reservoirs statewide should fill except Bear Lake, Utah Lake, Strawberry and Scofield Reservoir. The area of greatest drought concern is the Bear River with current reservoir storage at only 6% of capacity. Areas that could have high streamflows include the Uintah Basin, southeast Utah, Escalante, upper Sevier and the Virgin. Streamflow forecasts range from 57% to 351% of average. Surface Water Supply Indices range from 4% on the Bear River, to 95% on the Virgin.

SNOWPACK

March first snowpacks as measured by the NRCS SNOTEL system range from 102% on the Bear to 234% in southwestern Utah. Most snowpacks in northern Utah are 165% to 235% higher than last year, whereas the Uintah Basin and everything south of Salina have 250% to 440% of the snowpacks of last year. The Midway Valley SNOTEL site currently has 66.3 inches of snow water equivalent and its April 1 average peak is only 27 inches. Of some concern are low elevation snowpacks across the state, which are below average. Overall, snowpacks are much improved from years past.

PRECIPITATION

Mountain precipitation during March was 108% of average statewide. Precipitation was fairly consistent ranging from 92% on the Bear to 122% on the Provo. This brings the seasonal accumulation (Oct-Mar) to 137% of average statewide.

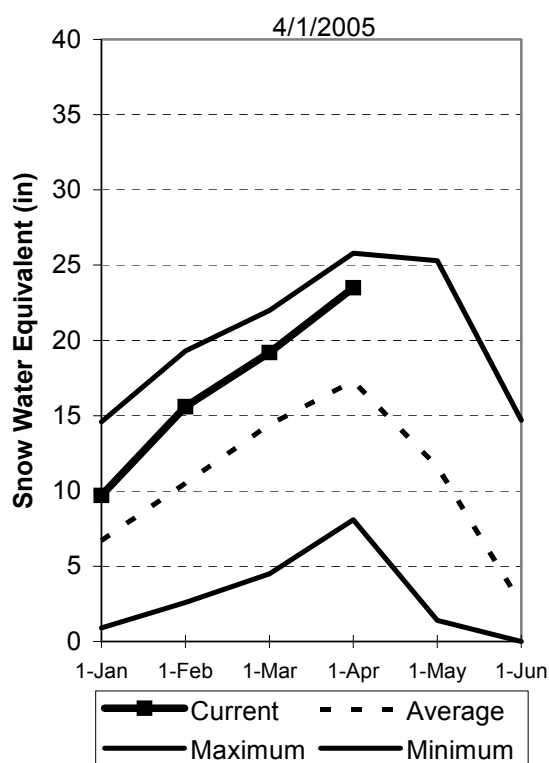
RESERVOIRS

Storage in 41 of Utah's key irrigation reservoirs is at 48% of capacity. This is an increase of 3% from last year. Reservoirs across the state have been making steady gains in storage. Larger reservoirs such as Bear Lake and Utah Lake remain low. Most reservoirs should fill this year.

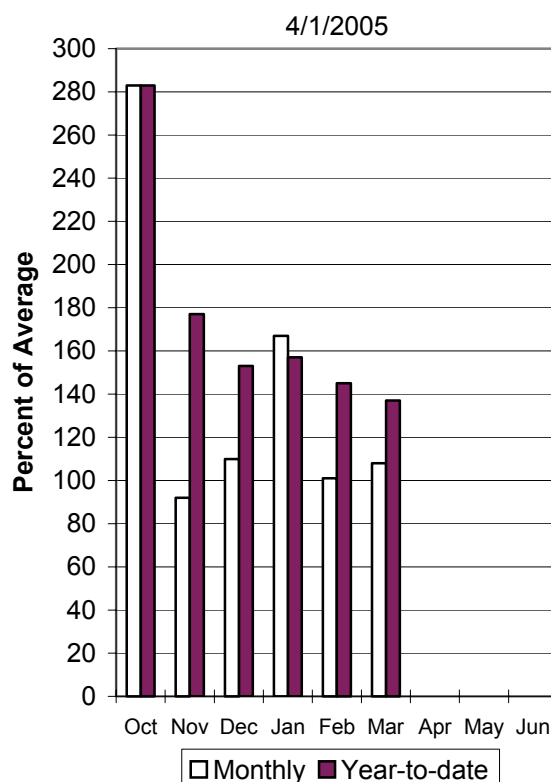
STREAMFLOW

Snowmelt streamflows are expected to be below average to much above average and even into record flows across the state of Utah this year. Forecast streamflows range from 57% on the Bear at Stewart dam to 351% on the Virgin. Most flows are forecast to be in the 100% to 160% range. Overall water supply conditions are improving.

Mountain Snowpack



Precipitation



Statewide Reservoir Storage

